Single Packaged Air Conditioner

SERVICE MANUAL

MODEL: LK-C1209C00
LK-C120BC00

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Safety Precautions

To prevent injury to the user or other people and property damage, the following instructions must be followed.

■ Be sure to read before installing the air conditioner.

■ Be sure to observe the cautions specified here as they include important items related to safety.

■ Incorrect operation due to ignoring instruction will cause harm or damage. The seriousness is classified by the following indications.

⚠WARNING	This symbol indicates the possibility of death or serious injury.
⚠CAUTION	This symbol indicates the possibility of injury or damage to properties only.

■ Meanings of symbols used in this manual are as shown below.

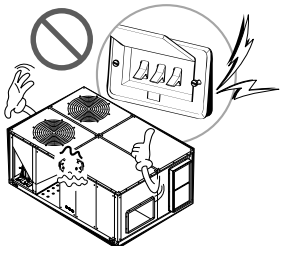
⃠	**Be sure not to do.**
❗	**Be sure to follow the instruction.**

⚠WARNING

■ Installation

Do not use a defective or underrated circuit breaker. Use this appliance on a dedicated circuit.

• There is risk of fire or electric shock.

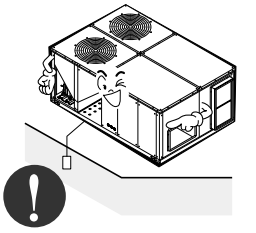


For electrical work, contact the dealer, seller, a qualified electrician, or an Authorized Service Center.

• Do not disassemble or repair the product. There is risk of fire or electric shock.

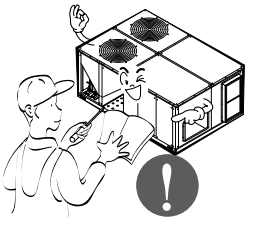
Always ground the product.

• There is risk of fire or electric shock.



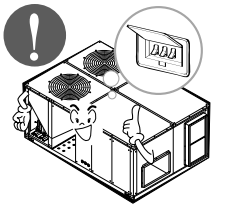
Install the panel and the cover of control box securely.

• There is risk of fire or electric shock.



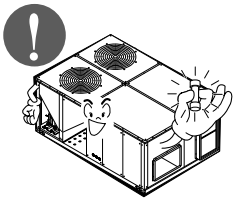
Always install a dedicated circuit and breaker.

• Improper wiring or installation may cause fire or electric shock



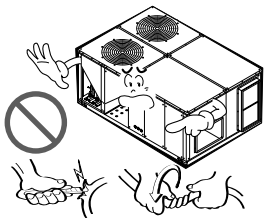
Use the correctly rated breaker or fuse.

• There is risk of fire or electric shock.



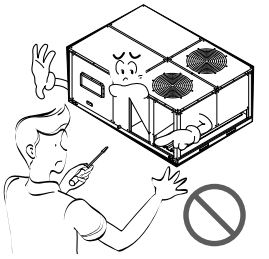
Use the specified wires to connect the unit.

• There is risk of fire or electric shock.



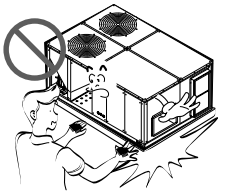
Do not install, remove, or re-install the unit by yourself (customer).

• There is risk of fire, electric shock, explosion, or injury.



Be cautious when unpacking and installing the product.

• Sharp edges could cause injury. Be especially careful of the case edges and the fins on the condenser and evaporator.

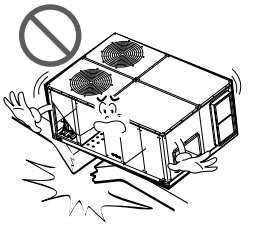


For installation, always contact the dealer or an Authorized Service Center.

• There is risk of fire, electric shock, explosion, or injury.

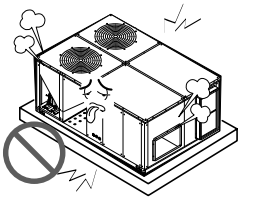
Do not install the product on a defective installation stand.

• It may cause injury, accident, or damage to the product.



Be sure the installation area does not deteriorate with age.

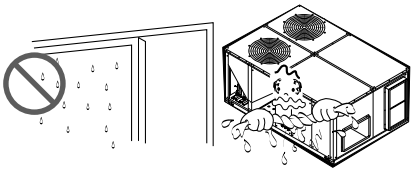
• If the base collapses, the air conditioner could fall with it, causing property damage, product failure, and personal injury.



■ Operation

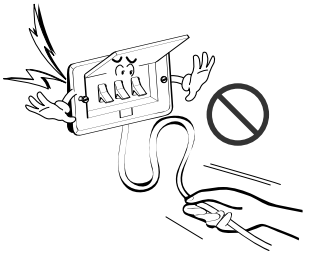
Do not let the air conditioner run for a long time when the humidity is very high and a door or a window is left open.

• Moisture may condense and wet or damage furniture.



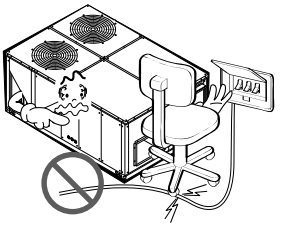
Take care to ensure that power cable could not be pulled out or damaged during operation.

• There is risk of fire or electric shock.



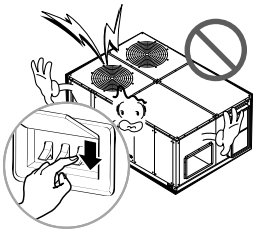
Do not place anything on the power cable.

• There is risk of fire or electric shock.



Do not plug or unplug the power supply plug during operation.

• There is risk of fire or electric shock.

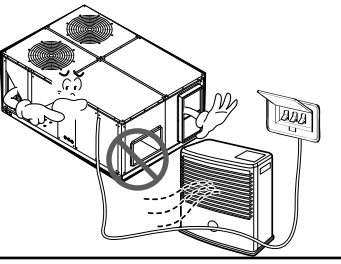


Do not touch(operate) the product with wet hands.

• There is risk of fire or electrical shock.

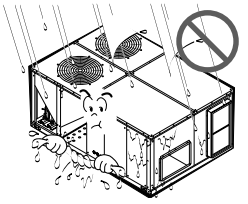
Do not place a heater or other appliances near the power cable.

• There is risk of fire and electric shock.



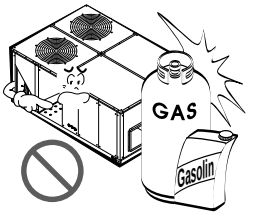
Do not allow water to run into electric parts.

- It may cause There is risk of fire, failure of the product, or electric shock.



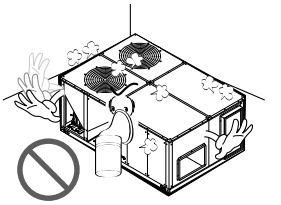
Do not store or use flammable gas or combustibles near the product.

- There is risk of fire or failure of product.



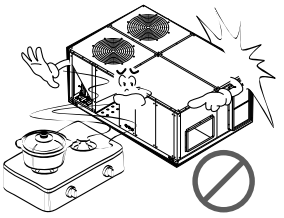
Do not use the product in a tightly closed space for a long time.

- Oxygen deficiency could occur.



When flammable gas leaks, turn off the gas and open a window for ventilation before turn the product on.

- Do not use the telephone or turn switches on or off. There is risk of explosion or fire

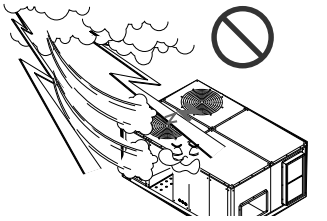


If strange sounds, or small or smoke comes from product. Turn the breaker off or disconnect the power supply cable.

- There is risk of electric shock or fire.

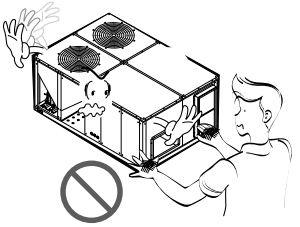
Stop operation and close the window in storm or hurricane. If possible, remove the product from the window before the hurricane arrives.

- There is risk of property damage, failure of product, or electric shock.



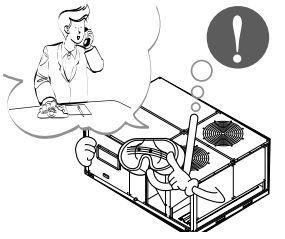
Do not open the panel of the product during operation. (Do not touch the electrostatic filter, if the unit is so equipped.)

- There is risk of physical injury, electric shock, or product failure.



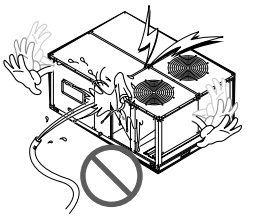
When the product is soaked (flooded or submerged), contact an Authorized Service Center.

- There is risk of fire or electric shock.



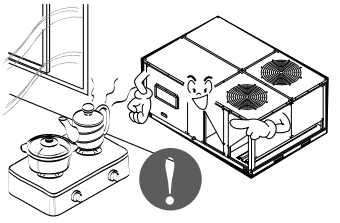
Be cautious that water could not enter the product.

- There is risk of fire, electric shock, or product damage.



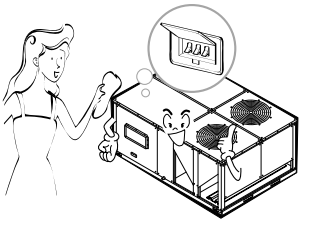
Ventilate the product from time to time when operating it together with a stove, etc.

- There is risk of fire or electric shock.



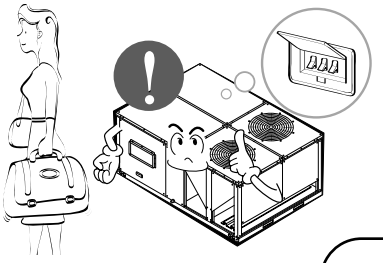
Turn the main power off when cleaning or maintaining the product.

- There is risk of electric shock.



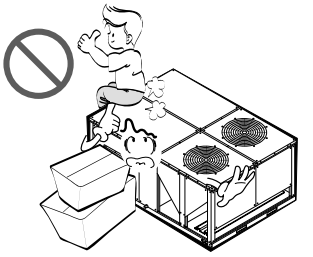
When the product is not be used for a long time, disconnect the power supply plug or turn off the breaker.

- There is risk of product damage or failure, or unintended operation.



Take care to ensure that nobody could step on or fall onto the unit.

- This could result in personal injury and product damage.

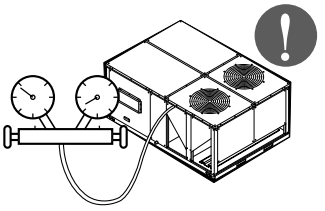


⚠CAUTION

■ Installation

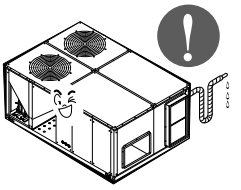
Always check for gas (refrigerant) pressure after installation or repair of product.

- Low refrigerant levels may cause failure of product.



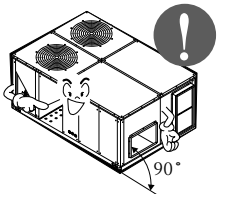
Install the drain hose to ensure that water is drained away properly.

- A bad connection may cause water leakage.



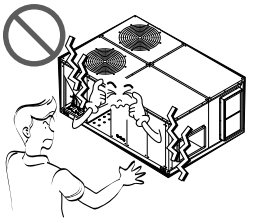
Keep level even when installing the product.

- To avoid vibration or water leakage.



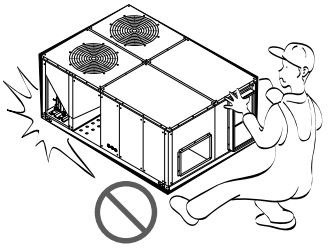
Do not install the product where the noise or hot air from the outdoor unit could damage the neighborhoods.

- It may cause a problem for your neighbors.



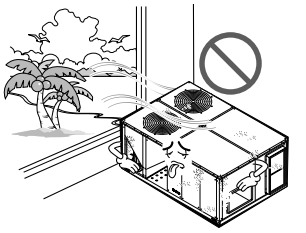
Don't use people to lift and transport the product.

- Avoid personal injury.



Do not install the product where it will be exposed to sea wind (salt spray) directly.

- It may cause corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient operation.



Having perfect vacuum process in the factory, our units don't have drier but have filter in the refrigerant circuit.

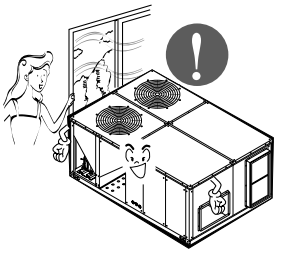
In case of recharging R-22 gas in the field,

"DRIER" must be installed on the liquid line which is connected from discharge part of condenser to intake part of evaporator. Because the refrigerant circuit is capable of containing water with imperfect vacuum.

■ Operation

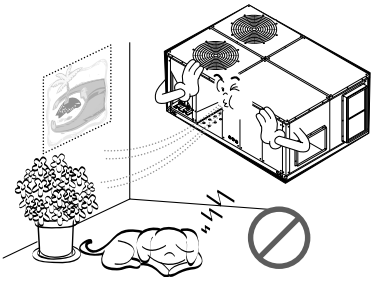
Do not expose the skin directly to cool air for long periods of time. (Don't sit in the draft.)

- This could harm to your health.



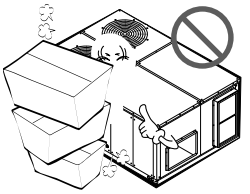
Do not use the product for special purposes, such as preserving foods, works of art, etc. It is a consumer air conditioner, not a precision refrigeration system.

- There is risk of damage or loss of property.



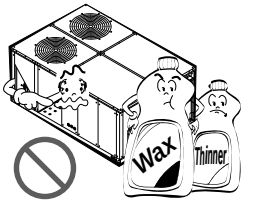
Do not block the inlet or outlet of air flow.

- It may cause product failure.



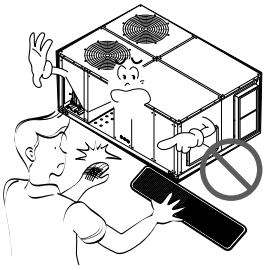
Use a soft cloth to clean. Do not use harsh detergents, solvents, etc.

- There is risk of fire, electric shock, or damage to the plastic parts of the product.



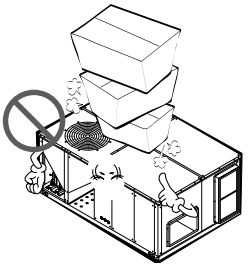
Do not touch the metal parts of the product when removing the air filter. They are very sharp!

- There is risk of personal injury.



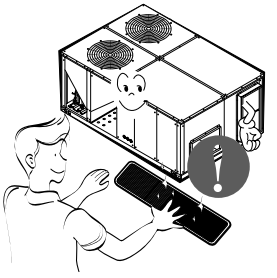
Do not step on or put anything on the product. (outdoor units)

- There is risk of personal injury and failure of product.



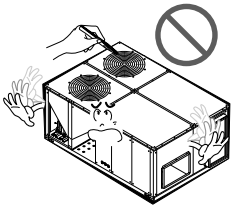
Always insert the filter securely. Clean the filter every four weeks or more often if necessary.

- A dirty filter reduces the efficiency of the air conditioner and could cause product malfunction or damage.



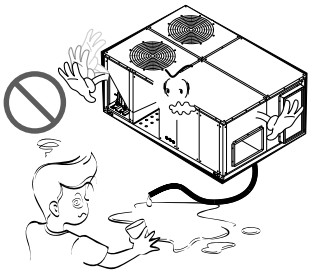
Do not insert hands or other objects through the air inlet or outlet while the product is operated.

- There are sharp and moving parts that could cause personal injury.



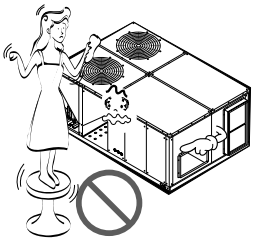
Do not drink the water drained from the product.

- It is not sanitary and could cause serious health issues.



Use a firm stool or ladder when cleaning or maintaining the product.

- Be careful and avoid personal injury.



Model Number Nomenclature

L K - C 1 2 0 9 C 0 0
1 2 3 4 5 6 7 8

1	Manufacturing plant/Refrigerant	L	Changwon/R-22
2	Classification	K	Single packed Air Conditioner
		N	Ducted split Air Conditioner
3	Type	C	Cooling Only
		H	Heat pump
4	Capacity(Btu/h)	036(36000 Btu/h)~360(360000Btu/h)	
5	Voltage/frequency/phase	2	220V, 60Hz, 1Phase
		8	380~415V, 50Hz, 3Phase
		9	380V, 60Hz, ,3Phase
		B	220V, 60Hz, 3Phase
		D	440~460V, 60Hz, 3Phase
6	Air flow/Top Side	C	Convertible Air Flow(Down+Horizontal)
		H	Horizontal Air Flow
7	Method/SEER	0	MICOM Control/10
		A	Mechanic Control/10
		D	Mechanic Control/13
8	Development Sequence	Given Number by Delevelopment Sequence	

General Data

Nominal ton			(Ton)	10	
Models				LK-C1209C00	LK-C120BC00
Electrical Data	ARI Net Cooling Capacity		(BTU/hr)	118,000	118,000
			(W)	34,582	34,582
			(Kcal/h)	29,736	29,736
	Voltage		(V,PH)	380V,3Ø	220V,3Ø
	M.C.A(with standard motor)	Cooling	(Amps)	33.2	50.2
	Power Input	Cooling	(Watt)	13,300	13,300
Performance	Air Circulation	Nominal CFM	CFM	4,000	4,000
	EER	Cooling	(BTU/hr.W)	8.9	8.9
	Sound Rating	Cooling	bell	8.5	8.5
Features	Wired Remote Controller			O(Accessory)	
	Time Delay Safety Function			O	
	Cooling Operation Mode			O	
	Heating Operation Mode(with E/Heater)			O	
	Soft Dry Operation			O	
	Timer Setting (24-Hour on/off)			O	
	Auto rastart mode			O	
	Humidifier function			O	
	Test function			O	
	Defrost			-	
	Hot Start			-	
	Self-Diagnosis Function			O	
	Phase reversal error sensing			O	
	Phase loss sensing			O	
	Filter type			washable & Anti-fungus	
Compressor	Type			Scrool	
	Quantity			2	
Outdoor Coil	Type			High efficiency	
	Tube size(O.D)		(inch)	0.375	
			(mm)	9.52	
	Row/FPI			2R/16FPI	
	Lengh		(inch)	39.37	
			(mm)	1,000	
	Face area		(sq.ft)	17.55	
			(m^2)	1.63	
Indoor Coil	Type			High efficiency	
	Tube size(O.D)		(inch)	0.375	
			(mm)	9.52	
	Row/FPI			3R/16FPI	
	Lengh		(inch)	27.6	
			(mm)	700	
	Face area		(sq.ft)	8.4	
			(m^2)	0.78	
Outdoor Fan	Type			Propeller	
	No. Used/Diameter(in.)			2EA/22"	
	Drive Type			Direct	
	CFM			7,000	
	No. Motor/Motor output(Hp)			2/0.4	
	Motor RPM			1,050	
Indoor Fan	Type			centrifugal blower fan	
	No. Used			1EA	
	Diameter/Width(in.)			15"/11"	
	Drive Type/Motor Step			Belt/1	
	No.motors			1EA	
	Motor output(standard/oversized)			3.0/5.0Hp	
	Motor rpm(Standard/oversized)			1720/1750	
Drain Connection Size(in.)				1	
Dimensions	Unit (WxHxD)		(inch)	85 $^3/_7$*48 $^6/_7$*55 $^1/_3$	
			(mm)	2,170*1,241*1,460	
Weight	net		(kg)	350	
			(lbs)	771.6	

1) Test Condition of ARI Rated Cooling Capacity :
   Ambient:95°F , Air entering temperature : 80°F DB and 67°F WB
2) ARI standard
   210/240 or 360 for EER
   270 for Sound
3) Filters are standard supply.

Dimensions

LK-C1209C00/BC00

UNIT Dimensions (Figure 1A)

Unit: inch(mm)

UNITS	10RT
H	48 6/7 (1241)
I	55 1/3 (1406)
J	85 3/7 (2170)
K	7 3/32 (180)
L	28 1/4 (724)
M	4 (100)

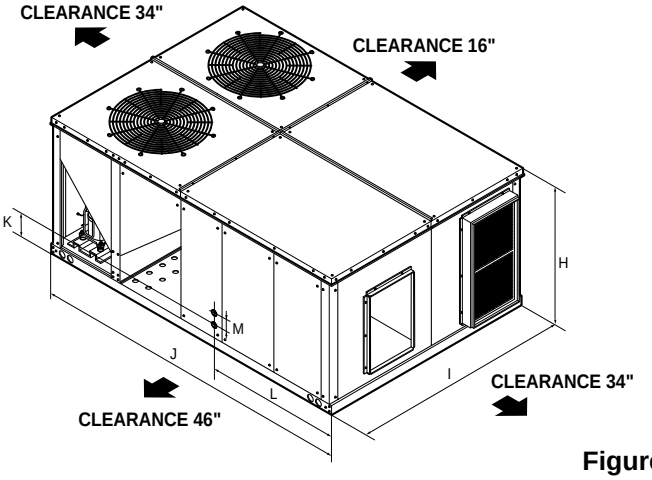


Figure 1A

HORIZONTAL FLOW APPLICATION (Figure 1B)

Unit: inch(mm)

UNITS	10RT
A	18 5/8 (473)
B	12 1/2 (316.5)
C	15 1/3 (390)
D	2 (53)
E	4 1/2 (115)
F	35 3/7 (900)
G	4 (100)
H	30 5/7 (780)

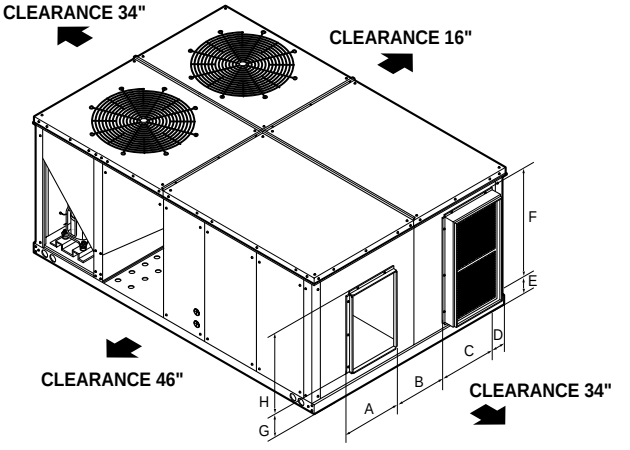


Figure 1B

DOWN FLOW APPLICATION (Figure 1C)

Unit: inch(mm)

UNITS	10RT
A	15 1/3 (390)
B	12 1/2 (316.5)
C	18 5/8 (473)
D	6 1/9 (155)
E	3 2/3 (68)
F	35 3/7 (900)
G	2 2/3 (68)
H	30 5/7 (780)

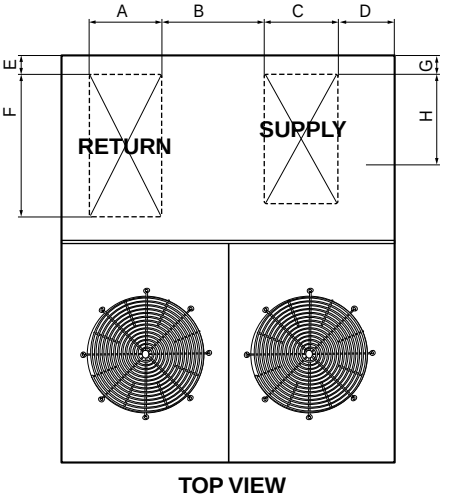
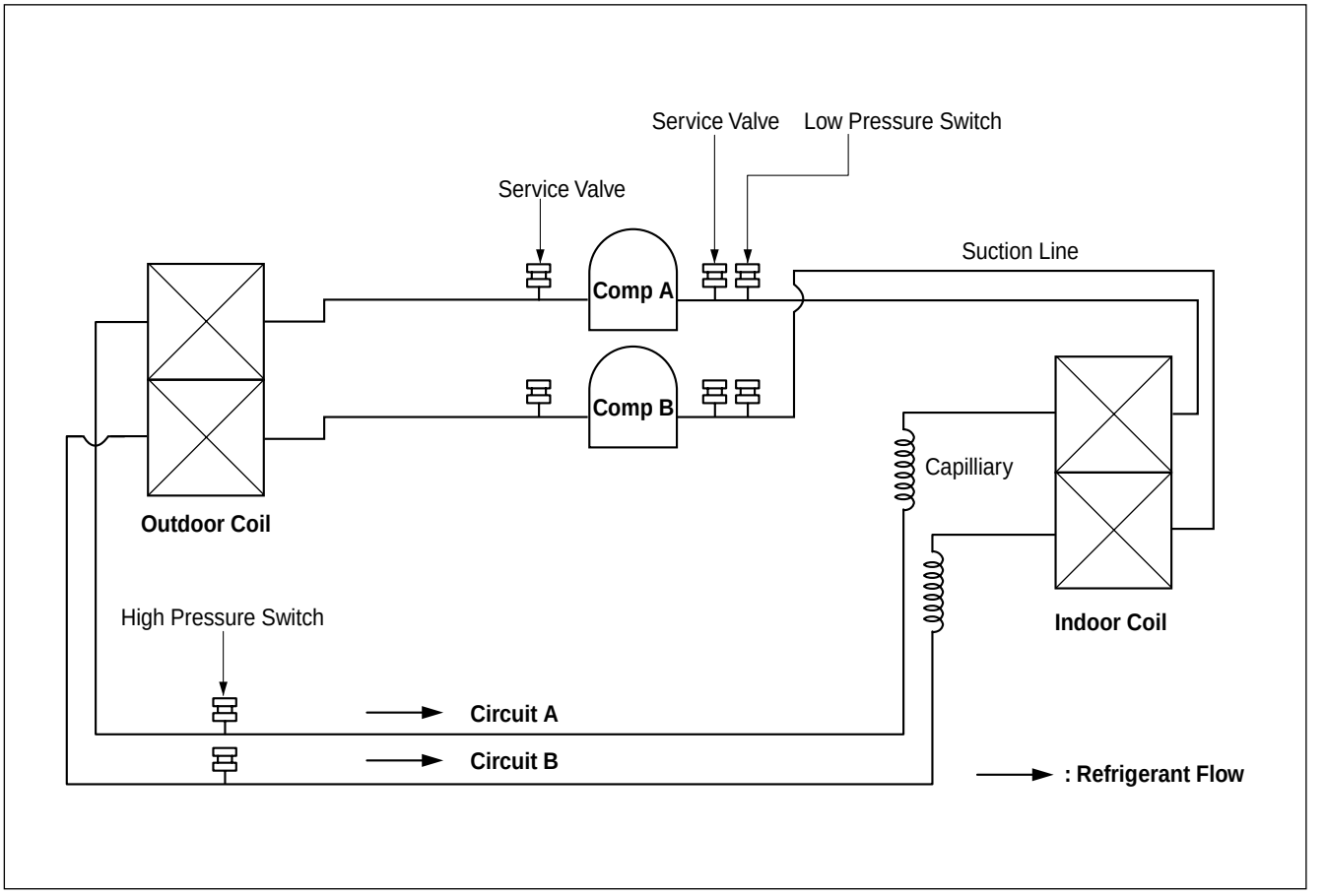


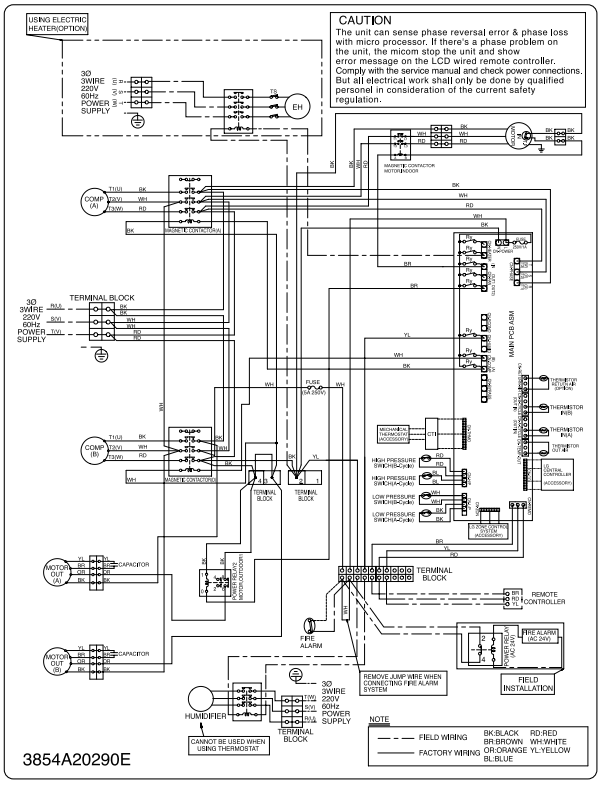
Figure 1C

Refrigerant Circuit Diagram



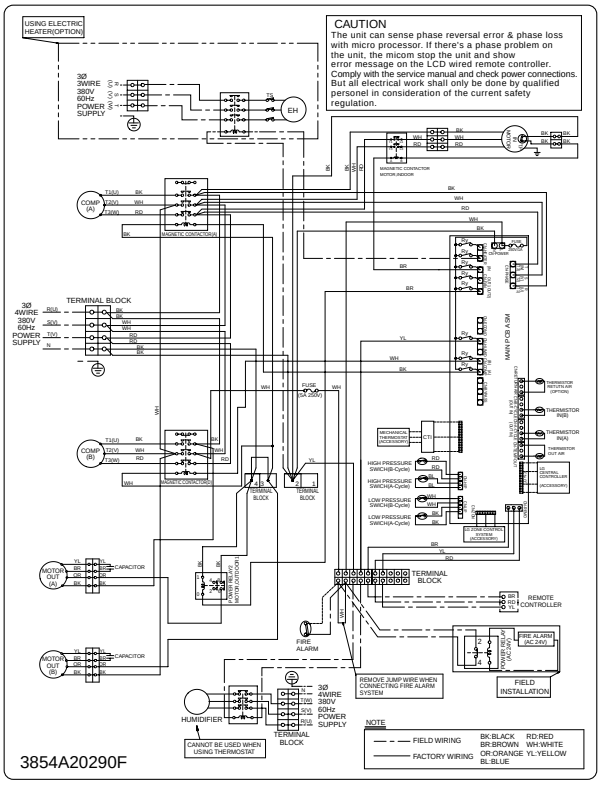
Wiring Diagram

LK-C120BC00


USING ELECTRIC HEATER(OPTION)
CAUTION
The unit can sense phase reversal error & phase loss with micro processor. If there's a phase problem on the unit, the micom stop the unit and show error message on the LCD wired remote controller. Comply with the service manual and check power connections. But all electrical work shall only be done by qualified personel in consideration of the current safety regulation.
3Ø 3WIRE 220V 60Hz POWER SUPPLY
EH
COMP (A)
COMP (B)
TERMINAL BLOCK
MAIN P.C.B ASSY
REMOTE CONTROLLER
FIRE ALARM
FIELD INSTALLATION
REMOVE JUMP WIRE WHEN CONNECTING FIRE ALARM SYSTEM
HUMIDIFIER
CANNOT BE USED WHEN USING THERMOSTAT
NOTE
FIELD WIRING
FACTORY WIRING
BK:BLACK BR:BROWN OR:ORANGE BL:BLUE RD:RED WH:WHITE YL:YELLOW

3854A20290E

LK-C1209C00


USING ELECTRIC HEATER(OPTION)
CAUTION
The unit can sense phase reversal error & phase loss with micro processor. If there's a phase problem on the unit, the micom stop the unit and show error message on the LCD wired remote controller. Comply with the service manual and check power connections. But all electrical work shall only be done by qualified personel in consideration of the current safety regulation.
3Ø 4WIRE 380V 60Hz POWER SUPPLY
EH
COMP (A)
COMP (B)
TERMINAL BLOCK
MAIN P.C.B ASSY
REMOTE CONTROLLER
FIRE ALARM
FIELD INSTALLATION
REMOVE JUMP WIRE WHEN CONNECTING FIRE ALARM SYSTEM
HUMIDIFIER
CANNOT BE USED WHEN USING THERMOSTAT
NOTE
FIELD WIRING
FACTORY WIRING
BK:BLACK BR:BROWN OR:ORANGE BL:BLUE RD:RED WH:WHITE YL:YELLOW

3854A20290F

Troubleshooting Guide

PACKAGE AIR CONDITIONER VOLTAGE LIMITS

NAME PLATE RATING	MINIMUM	MAXIMUM
380V	342V	418V
220V	198V	242V

1. No cooling and heating operation performed

1) Both the blower and the compressor do not work

WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Other parts except the unit	• Electric supply interrupted • Defective power wiring • Cut off power fuse	Measure power sypply with a tester in case that the same power source is supplied to other equipment except the unit, what and where troubled can be discovered by checking the operation of other equipment.	• Repair a switch box and relative instrument. • Replacement of fuse • Request a power supplier to repair.
	Too low voltage	Measure it with a tester.	Check the power source. Use a thick cable if necessary.
Magnetic Contactor for compressor & fan motor	Control point is on condition of "OFF" due to trouble.	Make short-circuit, then measure it with tester.	Replace it if necessary.
Operating switch	Troubled or defective contactor	Check it with the eyes or tester.	Repair or replace it.

2) Only Indoor blowers do not work

WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Motor	• Over heated • Wiring short	Check it with tester	Repair or replace it.
Electric wiring	• Cut- OFF of wiring • Short circuited on operation	Check it with a tester.	Rewiring or Repair.

3) Only outdoor fan does not work

WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Motor	• Over-heated • Wire short	Check how it is insulated.	Repair or replace it.
Electric Wiring	Cut off of wiring	Check it with a tester.	Rewiring or repair.
	Short circuited on operation		
Capacitor	Defected	Check it with tester.	Replace it.

4) Only compressor does not work

WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Magnetic switch for compressor motor	Defective contact, magnetic coil troubled.	Check it with the eyes on with a tester.	Repair or replace it.
Compressor motor	Troubled over-heated (layer short)	Check how it is insulated.	Replace or repair the compressor.
High pressure switch	Troubled or defective contact or operating	Check it with a tester.	Replace it if necessary.
Electric circuit	Defective connection or disconnection of the circuit for compressor.	Check it with a tester.	Rewiring or push reset button.

2. The Units discontinue after the operation started

WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Outdoor coil	Coil is dirty *1	Checking	Wash it by means of something like chemical washing.
In-condensable gas blended.	Air intruded into the refrigerant pipe line *1	In the event that difference between the saturating temperature corresponding to high pressure and the temperature of air discharged from the outdoor coil is more than 15°C, incondensable gas may be blended.	Extract air by vacuum pump, then replenish (charge) the refrigerant.
High pressure switch	Improper adjustment	Check it with a pressure gauge.	Read just it to normal operating pressure. (Note) Don't alternate the specified adjusting pressure. If the adjusted pressure exceed the specified range, it will cause a great accident.
Refrigerant	A shortage of refrigerant amount. * 2	Check pressure	Replenish the refrigerant. Repair the spot where it is leaked.
Outdoor Fan	Reverse rotation of fan Obstacle Air short circuit *1	Confirm the wind blowing out upward. Check it with eyes.	If reversed, connect interchanged wires to each terminal. Power wirings.

Note: Use an appropriate measuring instrument for readjustment.

*1: High-pressure switch moves.

*2: Low- pressure switch moves.

3. The unit is working, but not cooling and heating sufficiently (Both blower and compressor are working)

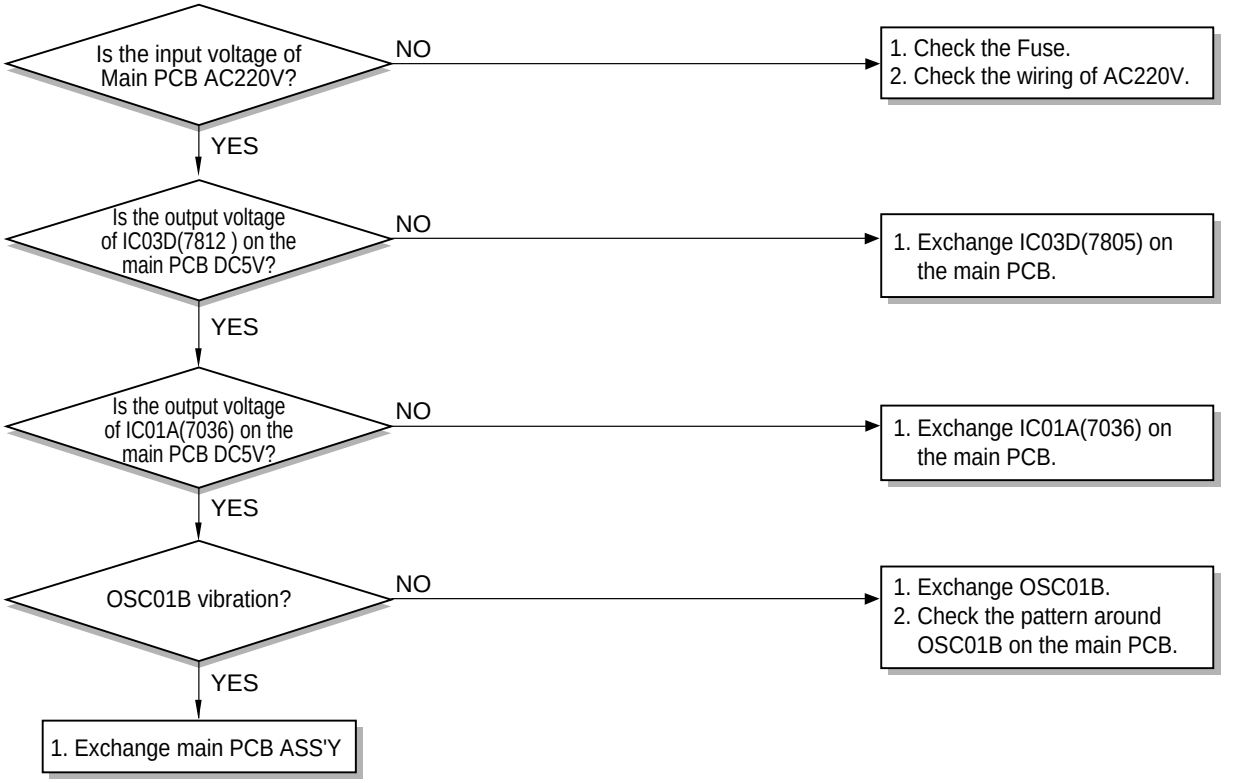
WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Load	Much Cooling or Heating load	Heat load increased. Window or door has many cracks or gaps.	Do necessary disposal respectively.
Air flow	Obstacle disturbs Intake of uniform airflow.	Checking	Correct it.
Short air volume	Reverse rotation of blower.	Checking	Correct it.
Refrigerant	Shortage in the charged refrigerant.	Coil inlet pipe is frosted	Recharge it. (Repair the leakage spot).
Air passage	Improper or foreign bodies	Checking	Correct or clear the foreign bodies.
Air filter	Clogged with dust	Checking	Cleaning

4. All the functions are performed as specified, but very noisy and vibrant

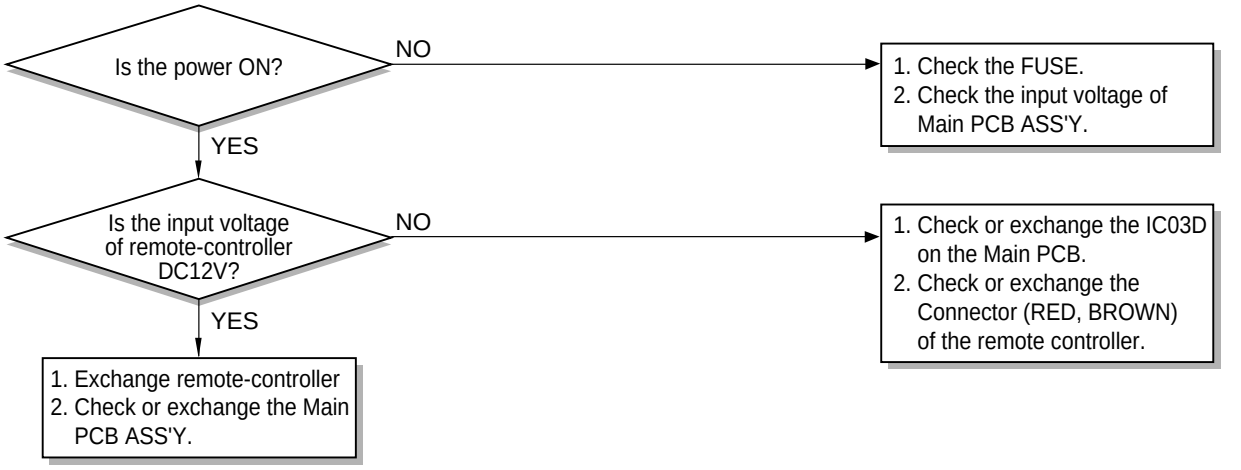
WHAT TROUBLED	COMPLAINTS	HOW TO CHECK	REMEDY
Compressor	Liquid refrigerant flooding back from the evaporator.	• Check for refrigerant over-charge. • Check to see if the intake air temperature is extremely cold. • Check for insufficient air flow quantity.	
	Faulty Discharge valve and suction valve.	• Checking	• Replace the compressor
Blower	Fan broken. Foreign matters intruded.	Checking	Repair or replace it. Clear the foreign bodies.
Screws	Looseness or fail-off of screws	Checking	Correct
Electric troubles (Magnetic contactor)	Defective contact. Defective contact point. Rusting and foreign matters in the iron core contact face. Defective contact of the operating switch.	Checking	Repair and clean or replace it.
Others	Improper installation	Checking	Correct it.

Electronic parts Troubleshooting Guide

Possible trouble 1 : The unit does not operate.

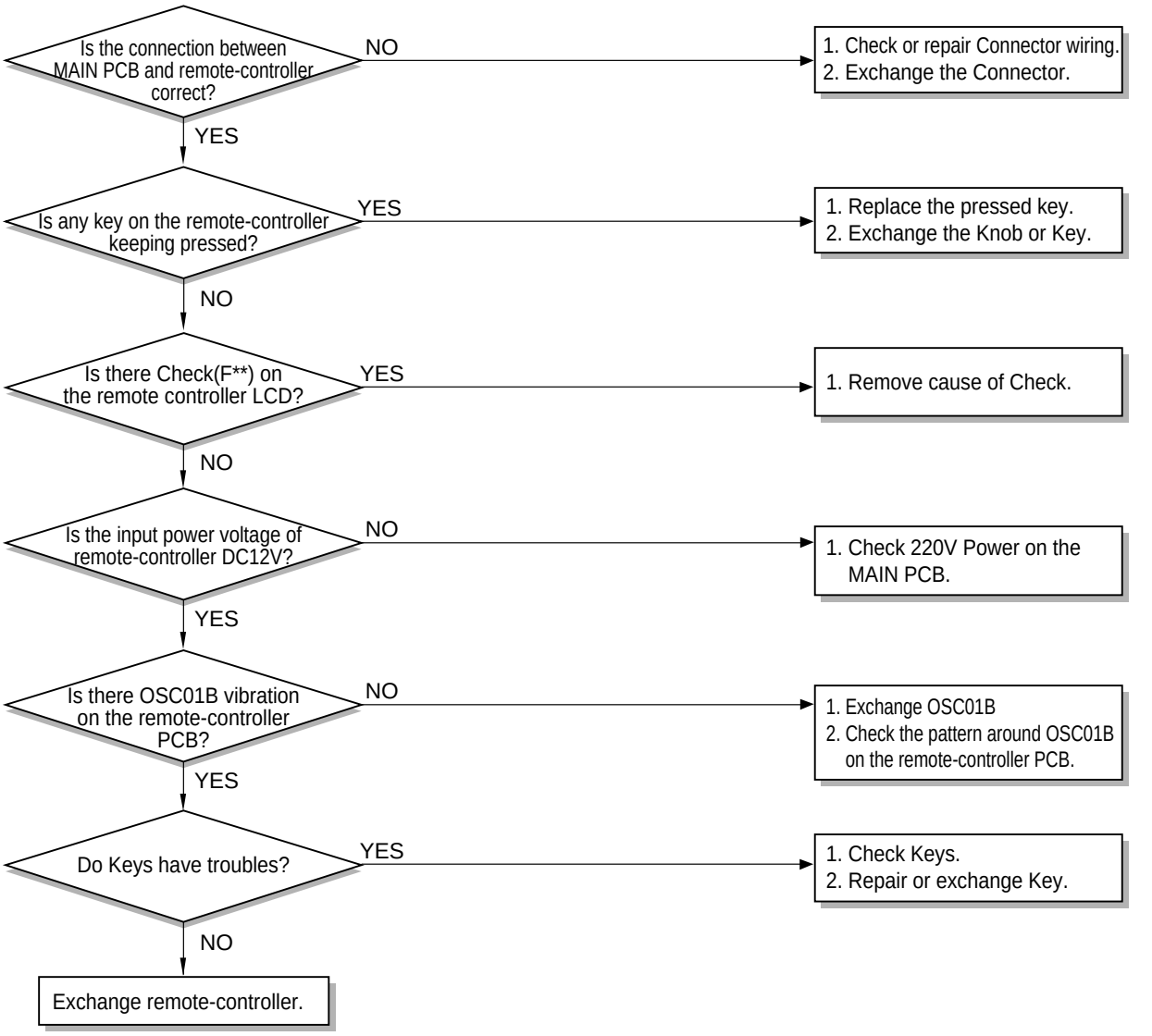

Is the input voltage of Main PCB AC220V?
NO
1. Check the Fuse.
2. Check the wiring of AC220V.
YES
Is the output voltage of IC03D(7812) on the main PCB DC5V?
NO
1. Exchange IC03D(7805) on the main PCB.
YES
Is the output voltage of IC01A(7036) on the main PCB DC5V?
NO
1. Exchange IC01A(7036) on the main PCB.
YES
OSC01B vibration?
NO
1. Exchange OSC01B.
2. Check the pattern around OSC01B on the main PCB.
YES
1. Exchange main PCB ASS'Y

Possible trouble 2 : The remote-controller does not operate.


Is the power ON?
NO
1. Check the FUSE.
2. Check the input voltage of Main PCB ASS'Y.
YES
Is the input voltage of remote-controller DC12V?
NO
1. Check or exchange the IC03D on the Main PCB.
2. Check or exchange the Connector (RED, BROWN) of the remote controller.
YES
1. Exchange remote-controller
2. Check or exchange the Main PCB ASS'Y.

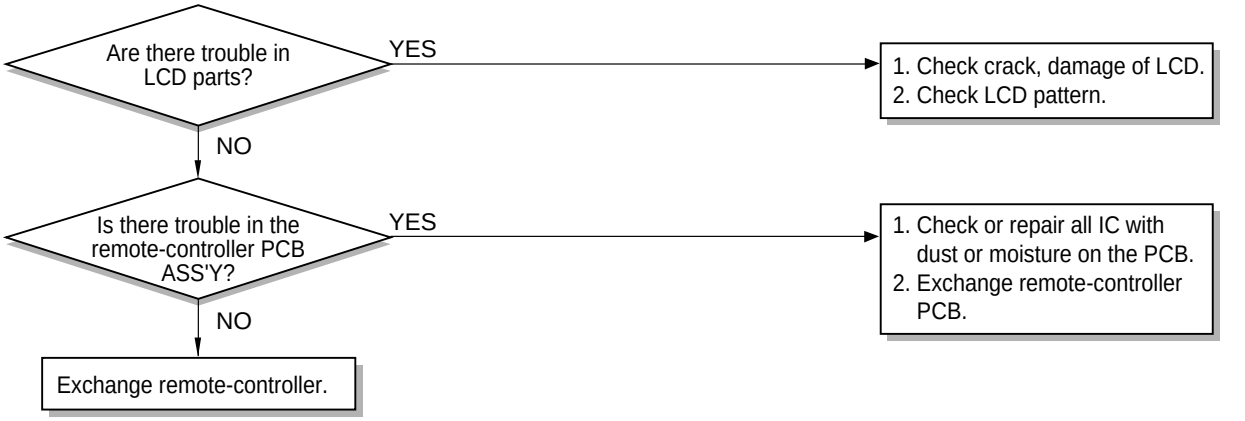
Possible trouble 3

: Key input of remote-controller does not respond.

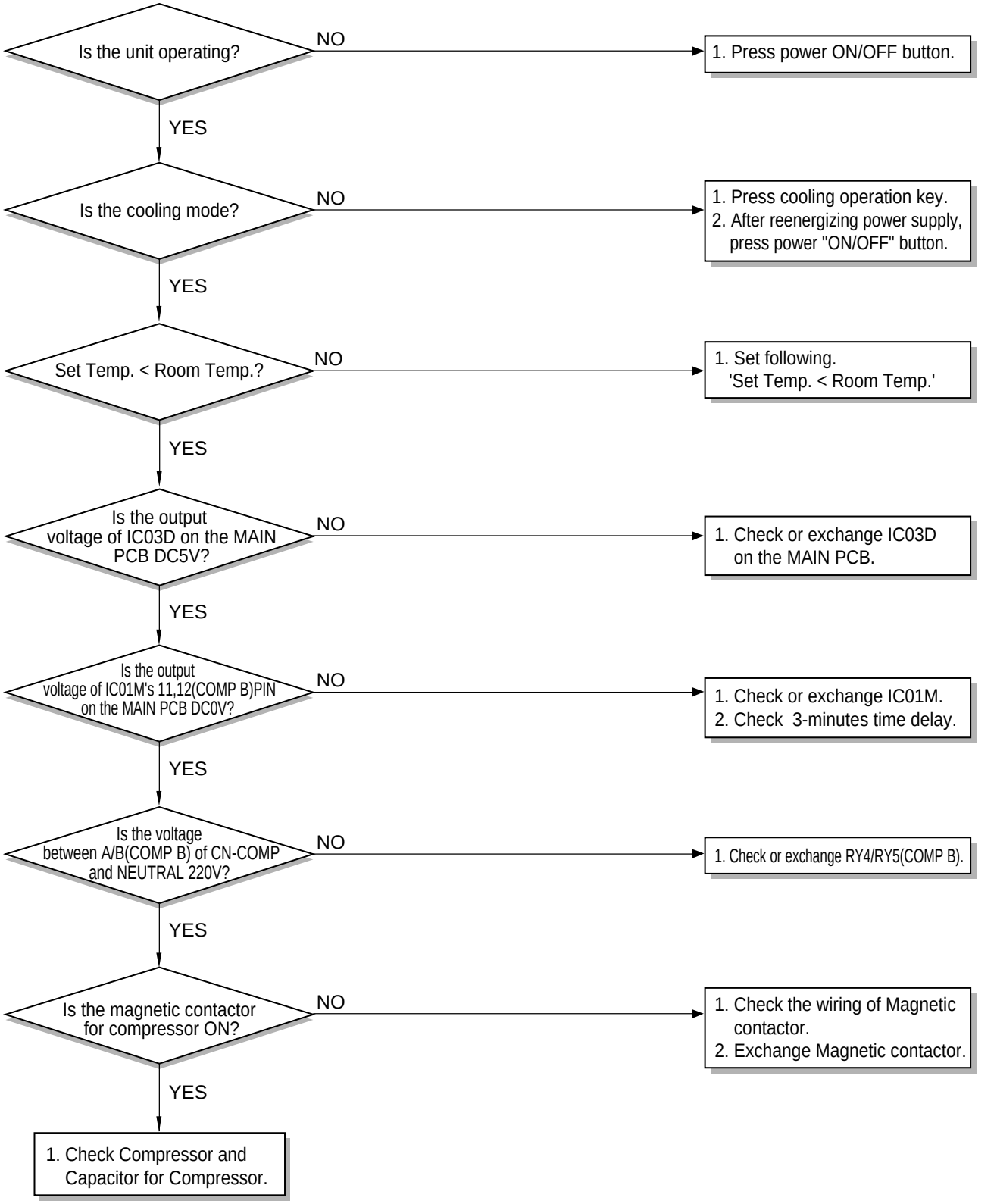


Possible trouble 4

: LCD display on the remote-controller shows some trouble.

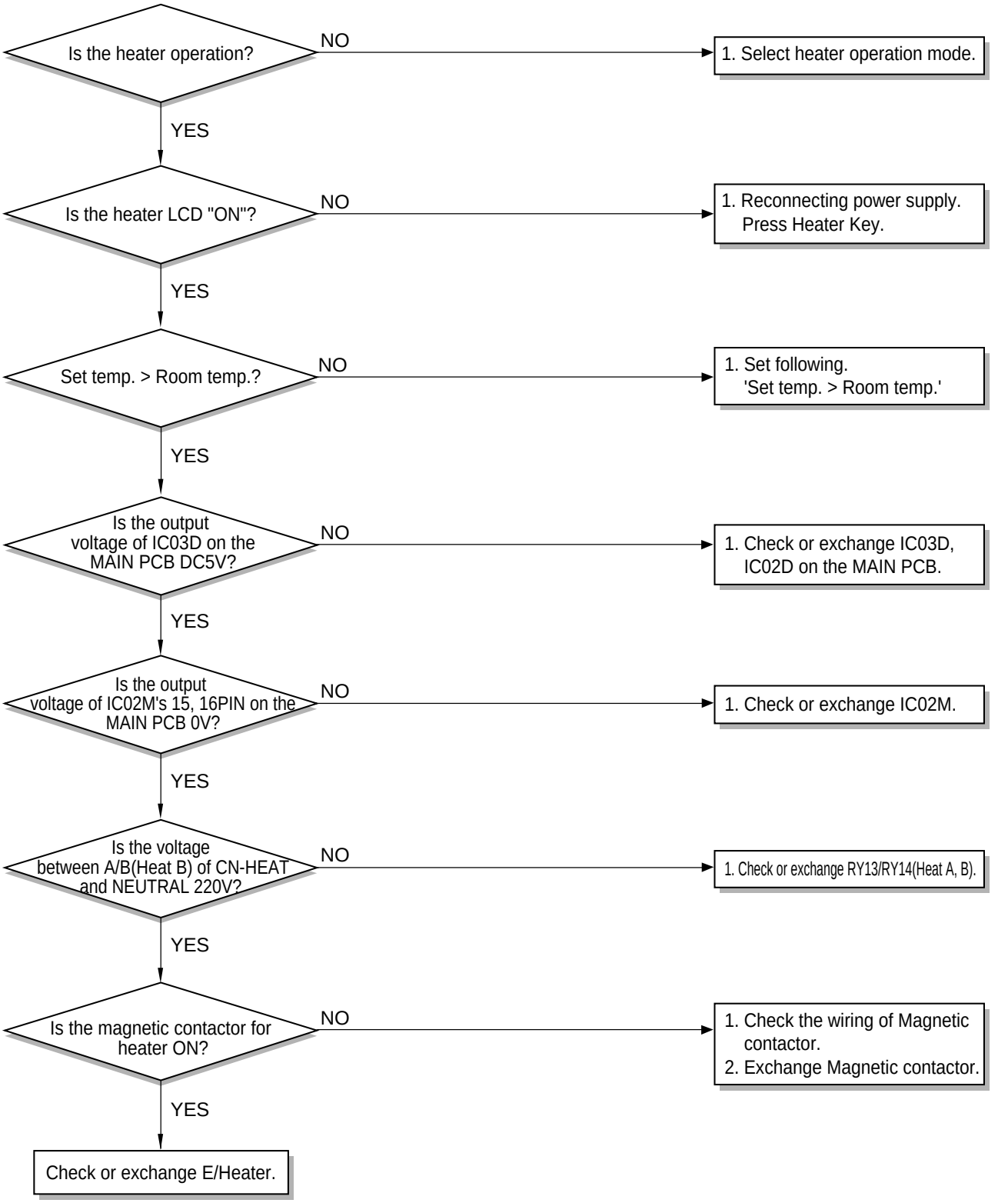

Are there trouble in LCD parts?
YES
1. Check crack, damage of LCD.
2. Check LCD pattern.
NO
Is there trouble in the remote-controller PCB ASS'Y?
YES
1. Check or repair all IC with dust or moisture on the PCB.
2. Exchange remote-controller PCB.
NO
Exchange remote-controller.

Possible trouble 5 : No cooling operation performed.

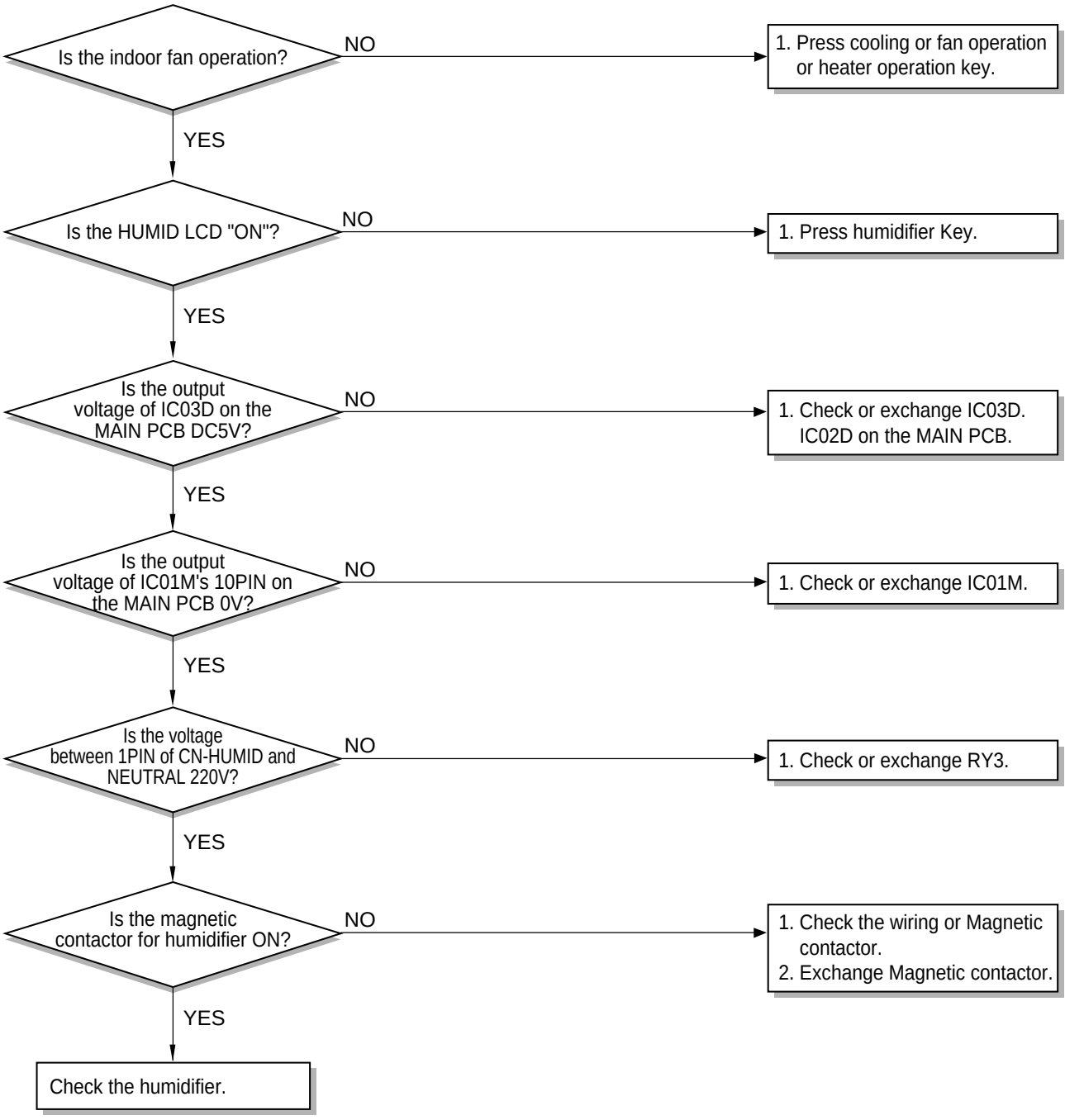

Is the unit operating?
NO
1. Press power ON/OFF button.
YES
Is the cooling mode?
NO
1. Press cooling operation key.
2. After reenergizing power supply, press power "ON/OFF" button.
YES
Set Temp. < Room Temp.?
NO
1. Set following.
'Set Temp. < Room Temp.'
YES
Is the output voltage of IC03D on the MAIN PCB DC5V?
NO
1. Check or exchange IC03D on the MAIN PCB.
YES
Is the output voltage of IC01M's 11,12(COMP B)PIN on the MAIN PCB DC0V?
NO
1. Check or exchange IC01M.
2. Check 3-minutes time delay.
YES
Is the voltage between A/B(COMP B) of CN-COMP and NEUTRAL 220V?
NO
1. Check or exchange RY4/RY5(COMP B).
YES
Is the magnetic contactor for compressor ON?
NO
1. Check the wiring of Magnetic contactor.
2. Exchange Magnetic contactor.
YES
1. Check Compressor and Capacitor for Compressor.

NOTE: 3ø model has not capacitor for compressor.

Possible trouble 6 : No heater operation performed.

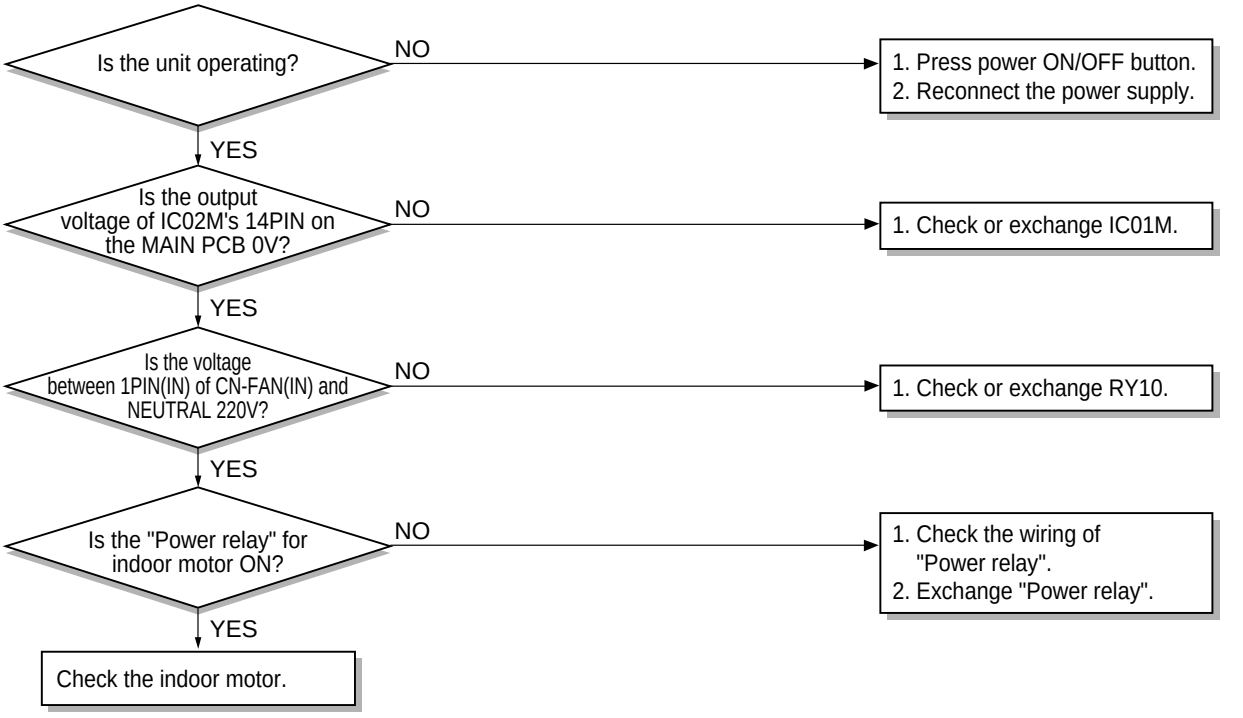

Is the heater operation?
NO
1. Select heater operation mode.
YES
Is the heater LCD "ON"?
NO
1. Reconnecting power supply.
Press Heater Key.
YES
Set temp. > Room temp.?
NO
1. Set following.
'Set temp. > Room temp.'
YES
Is the output voltage of IC03D on the MAIN PCB DC5V?
NO
1. Check or exchange IC03D, IC02D on the MAIN PCB.
YES
Is the output voltage of IC02M's 15, 16PIN on the MAIN PCB 0V?
NO
1. Check or exchange IC02M.
YES
Is the voltage between A/B(Heat B) of CN-HEAT and NEUTRAL 220V?
NO
1. Check or exchange RY13/RY14(Heat A, B).
YES
Is the magnetic contactor for heater ON?
NO
1. Check the wiring of Magnetic contactor.
2. Exchange Magnetic contactor.
YES
Check or exchange E/Heater.

Possible trouble 7 : No humidifier operation performed.


Is the indoor fan operation?
NO
1. Press cooling or fan operation or heater operation key.
YES
Is the HUMID LCD "ON"?
NO
1. Press humidifier Key.
YES
Is the output voltage of IC03D on the MAIN PCB DC5V?
NO
1. Check or exchange IC03D. IC02D on the MAIN PCB.
YES
Is the output voltage of IC01M's 10PIN on the MAIN PCB 0V?
NO
1. Check or exchange IC01M.
YES
Is the voltage between 1PIN of CN-HUMID and NEUTRAL 220V?
NO
1. Check or exchange RY3.
YES
Is the magnetic contactor for humidifier ON?
NO
1. Check the wiring or Magnetic contactor.
2. Exchange Magnetic contactor.
YES
Check the humidifier.

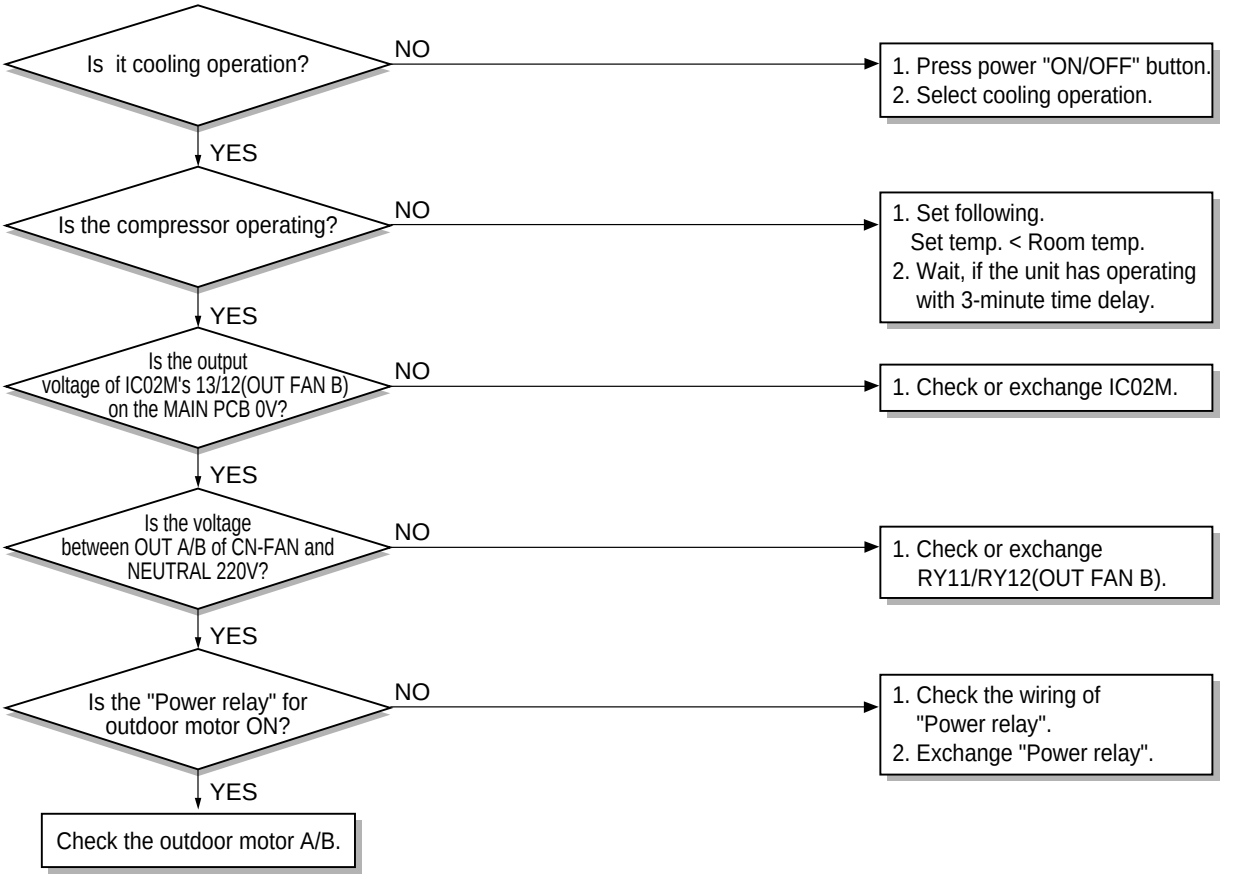
Possible trouble 8

: Indoor motor does not operate.

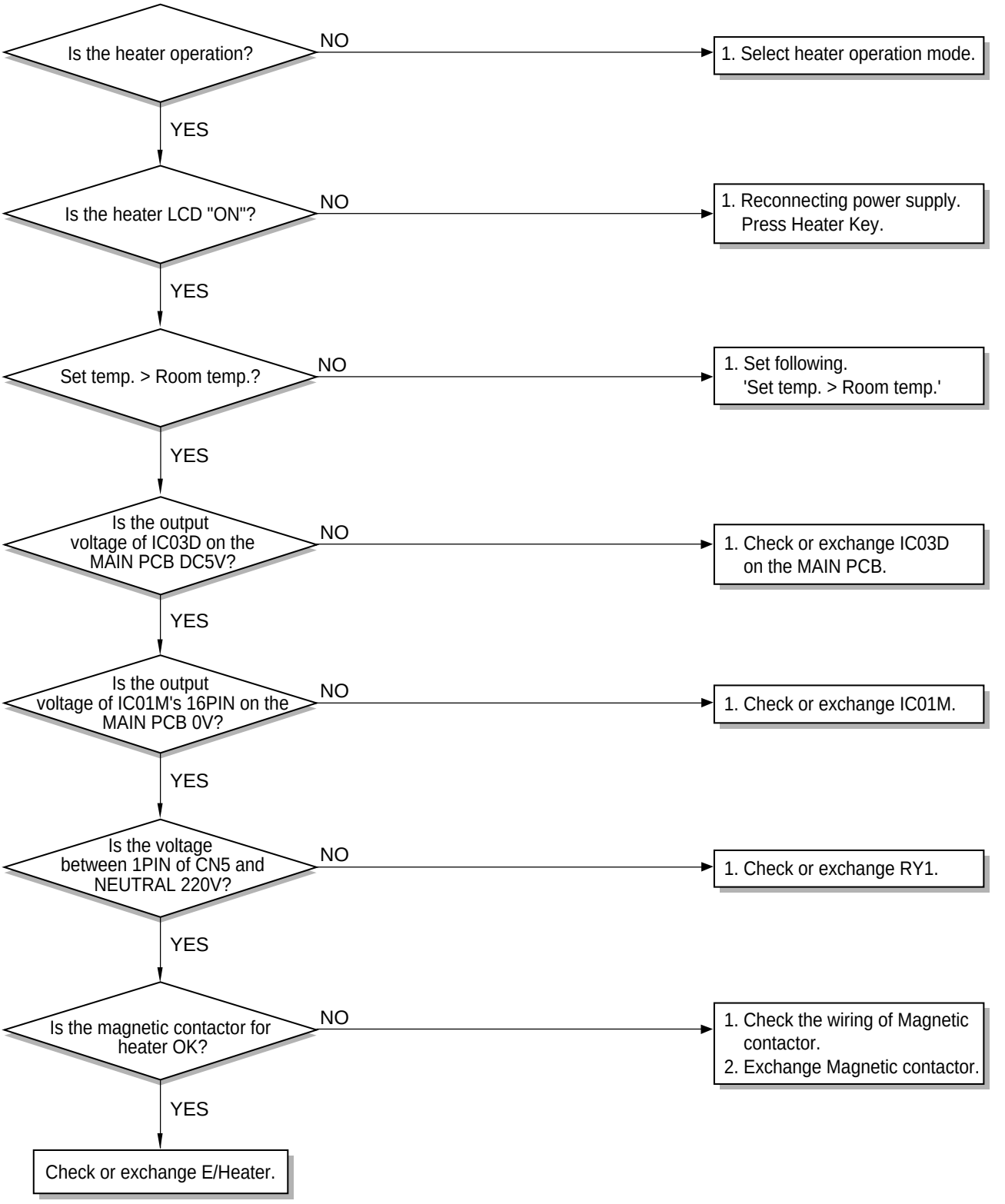

Is the unit operating?
NO
1. Press power ON/OFF button.
2. Reconnect the power supply.
YES
Is the output voltage of IC02M's 14PIN on the MAIN PCB 0V?
NO
1. Check or exchange IC01M.
YES
Is the voltage between 1PIN(IN) of CN-FAN(IN) and NEUTRAL 220V?
NO
1. Check or exchange RY10.
YES
Is the "Power relay" for indoor motor ON?
NO
1. Check the wiring of "Power relay".
2. Exchange "Power relay".
YES
Check the indoor motor.

Possible trouble 9

: Outdoor motor does not operate.

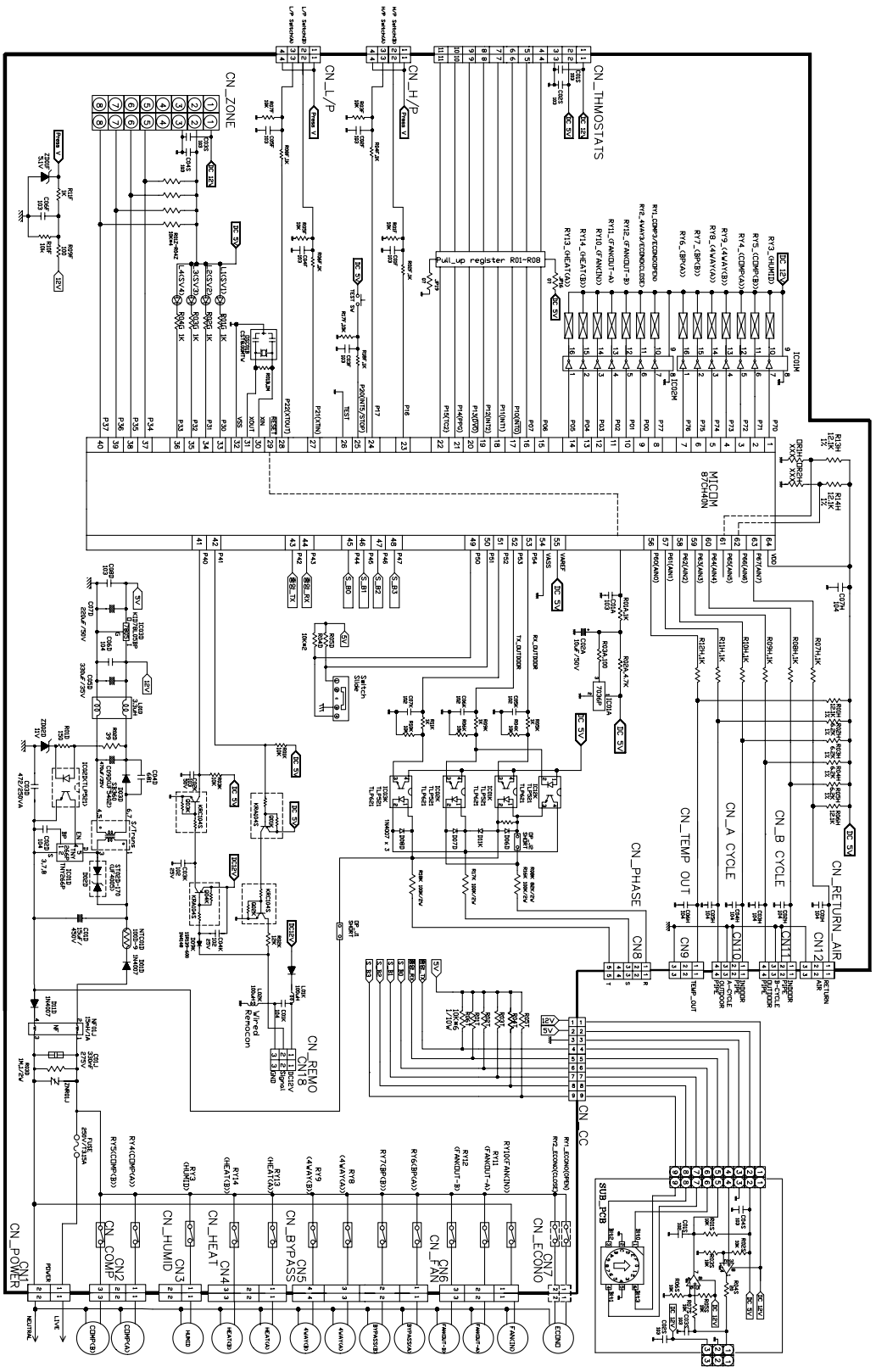

Is it cooling operation?
NO
1. Press power "ON/OFF" button.
2. Select cooling operation.
YES
Is the compressor operating?
NO
1. Set following.
Set temp. < Room temp.
2. Wait, if the unit has operating with 3-minute time delay.
YES
Is the output voltage of IC02M's 13/12(OUT FAN B) on the MAIN PCB 0V?
NO
1. Check or exchange IC02M.
YES
Is the voltage between OUT A/B of CN-FAN and NEUTRAL 220V?
NO
1. Check or exchange RY11/RY12(OUT FAN B).
YES
Is the "Power relay" for outdoor motor ON?
NO
1. Check the wiring of "Power relay".
2. Exchange "Power relay".
YES
Check the outdoor motor A/B.

Possible trouble 10 : No heater operation performed.

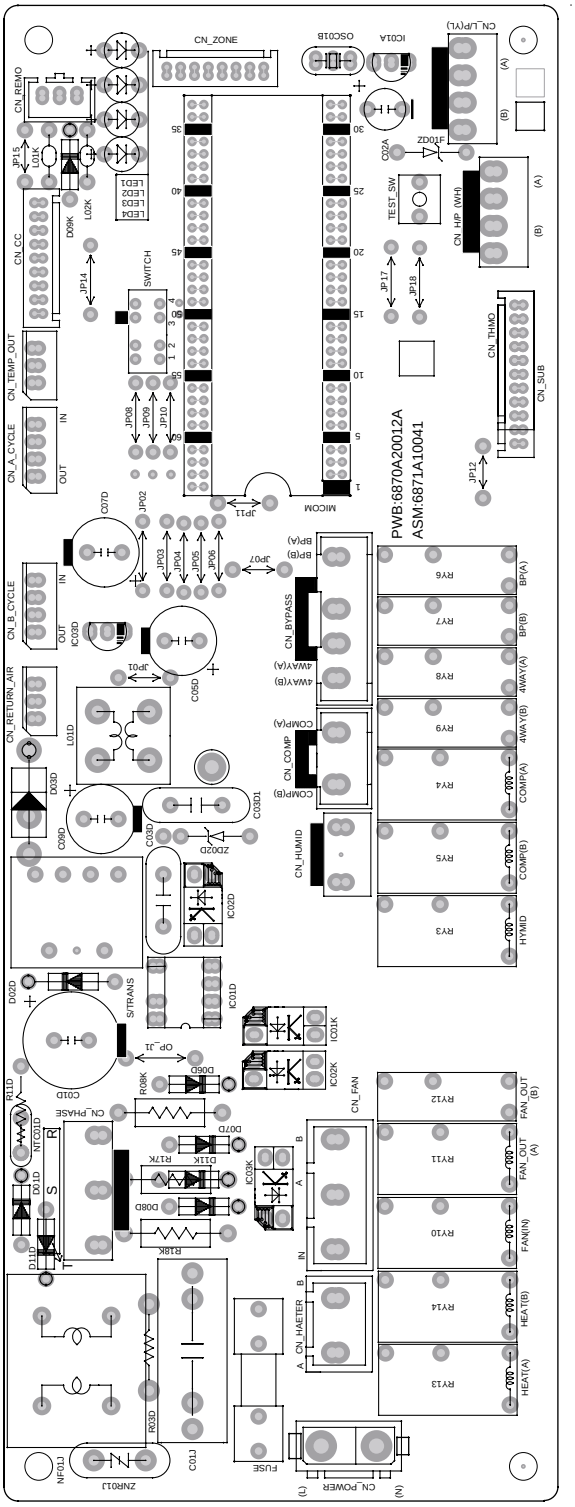


Features of Controller

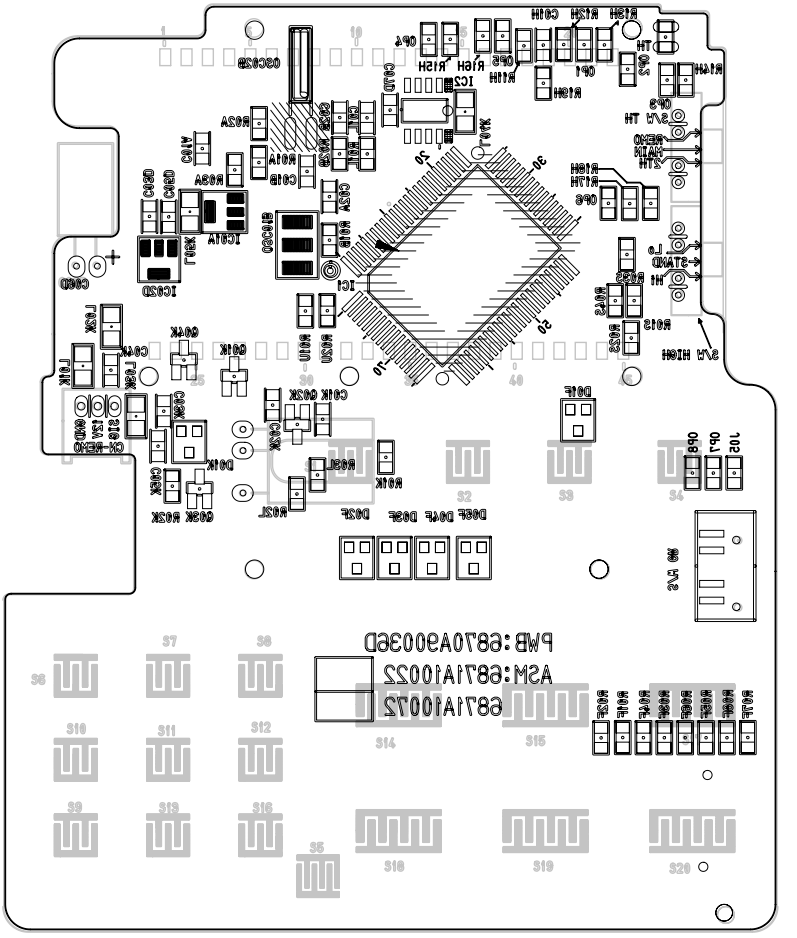
1. Main Controller Circuit Diagram



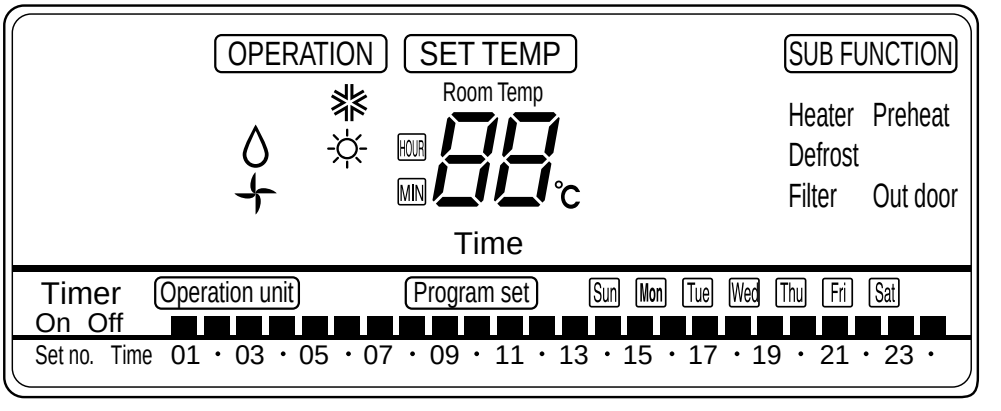
2. Feature of Main Controller



3. Feature of Remote-Controller PCB ASS'Y



4. Feature of Remote-Controller LCD



5. Error Mode & Corrective Method

Error mode	Cause of error	Sensing condition of error	Method of SVC	Remark
CH01	OPEN/SHORT of room temp. sensor	Voltage of sensing: Over 4.8V Voltage of sensing: Less than 0.5V	1. Check the voltage of "CO1H" on the remote controller. 2. Check the temp. sensor of remtote controller.	Room temp.(25°C) = DC 2.5V
CH02	OPEN/SHORT of indoor pipe temp. sensor	Voltage of sensing: Over 4.8V Voltage of sensing: Less than 0.5V	1. Check the voltage between PIN 3 and 4 of CN-A cycle/CN-B cycle. 2. Check the temp. sensor of indoor pipe.	Pipe temp.(25°C) = DC 2.2V
CH03	Communication Error	Communication interruption between remote controller and Main PCB for 2 minutes.	1. Check the connecting wire between main PCB remote controller. 2. Check the input voltage of remote-controller. 3. Check the wiring of remote-controller.	Input voltage of remote-controller = DC 12V
CH04	OPEN/SHORT of outdoor pipe sensor	Voltage of sensing: Over 4.8V Voltage of sensing: Less than 0.5V	1. Check the voltage between PIN 1 and 2 of CN-A cycle/CN-B cycle ON the main PCB. 2. Check the temp. sensor of remtote controller.	Pipe temp.(25°C) = DC 2.5V
CH05	OPEN/SHORT of outdoor room temp. sensor	Voltage of sensing: Over 4.8V Voltage of sensing: Less than 0.5V	1. Check the voltage between PIN 1 and 3 of CN-TEMP OUT on the main PCB. 2. Check the temp. sensor of outdoor room.	Room temp.(25°C) = DC 2.2V

6. Principal part list of controller

Model	Main PCB ASM	Remote controller	Pipe Sensor A	Pipe Sensor A/B	Return Air Sensor	Outdoor Room Sensor	Remark
LK-C1209C00 LK-C120BC00	6871A10041A	6711A20043Y	6323AQ2333T	6323AQ2333U	6323AQ3214M (OPTIONAL)	6323AQ3214H	Cooling Only

7. Principal part list of Main PCB ASM

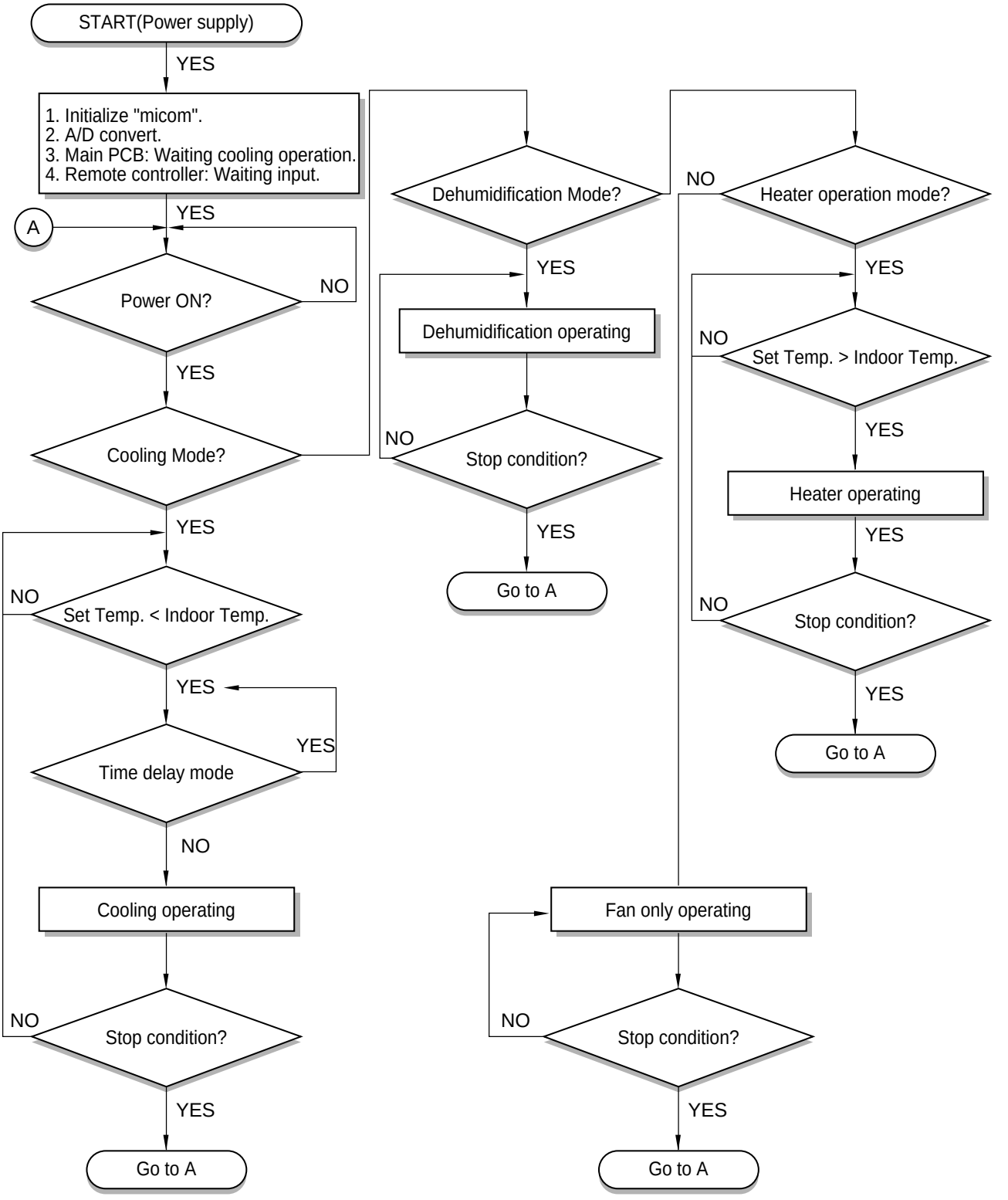
No	Part No	Part Name	Remarks
1	0IMCRTO020C	MICOM(Main)	MICOM
2	6920AQ9033F	Relay	
3	6212A90001E	Resonator	
4	6900AQ9028N	Fuse	
5	6102AQ9075A	Varistor	

8. Principal part list of Remote Controller

No	Part No	Part Name	Remark
1	OIMCRTO006K	MICOM(Remote Controller)	MICOM
2	6304A30001K	LCD	6
3	6871A10072G	Remote C PCB ASM	Cooling Only
4			

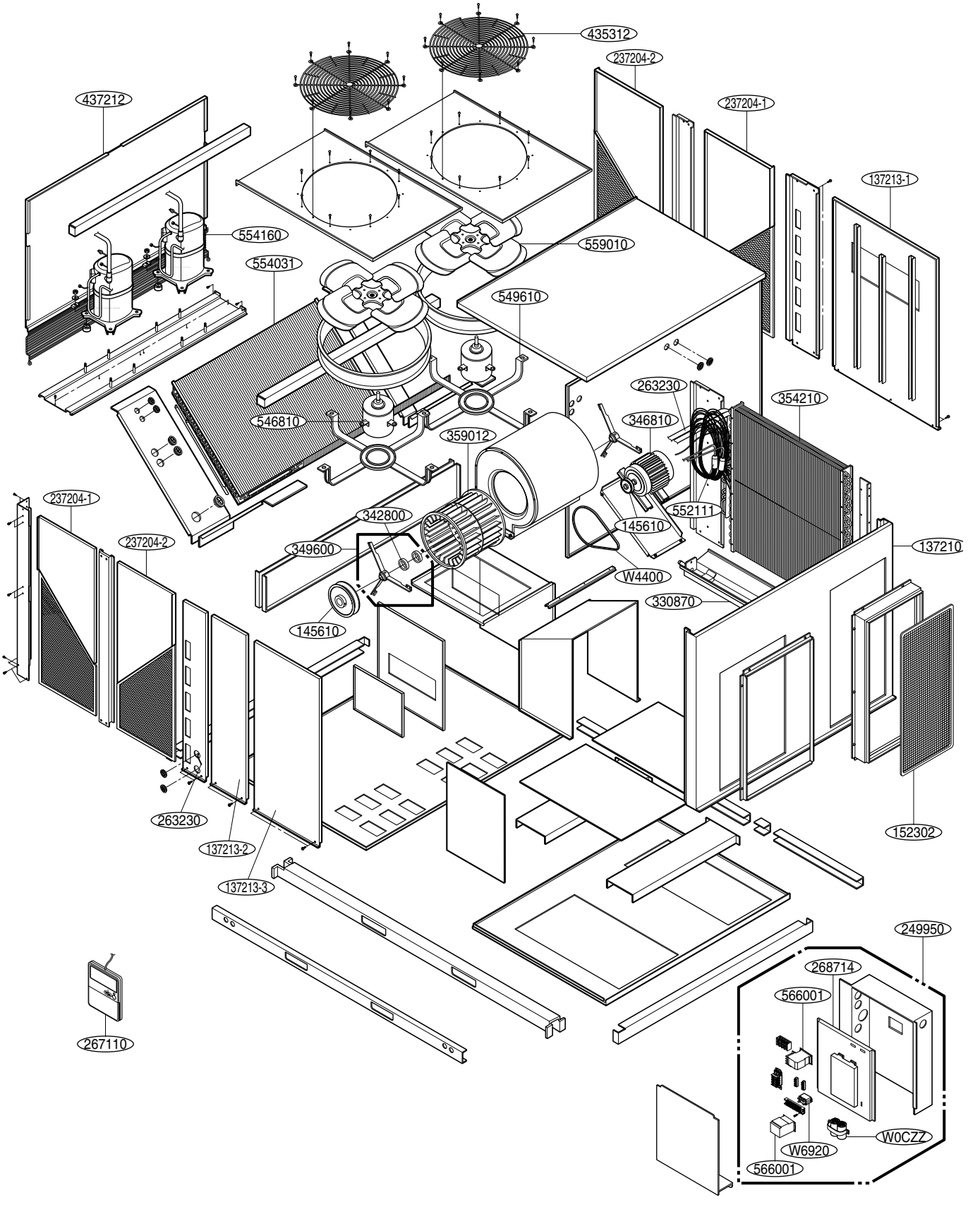
9. Explanation of principal function

■ Flow Chart



Exploded View and Replacement Parts List

• Exploded View



• Replacement Parts List

LOCATION No	DESCRIPTION	PART No.		REMARKS
		LK-C120BC00	LK-C1209C00	
137210	PANEL ASSEMBLY,FRONT(INDOOR)	3721A11002A	3721A11002A	
145610	PULLEY ASSEMBLY	4561A30002B	4561A30002B	Blower Side
145610	PULLEY ASSEMBLY	3A00217R	3A00217R	Indoor Motor Side
152302	FILTER(MECH),A/C	5230A20003R	5230A20003R	
249950	CONTROL BOX ASSEMBLY,SINGLE	4995A11001B	4995A11001A	
263230	THERMISTOR ASSEMBLY	6323AQ2333T	6323AQ2333T	Pipe Senser A-cycle
263230	THERMISTOR ASSEMBLY	6323AQ2333U	6323AQ2333U	Pipe Senser B-cycle
263230	THERMISTOR ASSEMBLY	6323AQ3214H	6323AQ3214H	Outdoor Temp.senser
267110	REMOTE CONTROLLER ASSEMBLY	6711A20043Y	6711A20043Y	
268714	PWB(PCB) ASSEMBLY,MAIN	6871A10041A	6871A10041A	
330870	DRAIN PAN ASSEMBLY	3087A20020C	3087A20020C	
342800	BEARING	4A00131A	4A00131A	
346810	MOTOR ASSEMBLY,INDOOR	4681A20025A	4681A20094C	
349600	BRACKET ASSY	4811A10003A	4811A10003A	
354210	EVAPORATOR ASSEMBLY,FIRST	5421A20151B	5421A20151B	Upper
354210	EVAPORATOR ASSEMBLY,FIRST	5421A20151C	5421A20151C	Lower
359012	FAN ASSEMBLY,BLOWER	5835A20003A	5835A20003A	
435312	GRILLE,DISCHARGE	3530A20007H	3530A20007H	
437212	PANEL ASSEMBLY,REAR(OUTDOOR)	3721A10095A	3721A10095A	
546810	MOTOR ASSEMBLY,OUTDOOR	4681A20106A	4681A20106A	
549610	MOUNT ASSEMBLY,MOTOR(OUTDOOR)	4961A20029A	4961A20029A	
552111	TUBE ASSEMBLY,CAPILLARY	5211A23019A	5211A23019A	
554031	CONDENSER ASSEMBLY,FIRST	5403A20137D	5403A20137D	Gold Fin
		5403A20137C	5403A20137C	Bare Fin
554160	COMPRESSOR SET	2520UNDR2AA	2520UNDU2DA	
559010	FAN ASSEMBLY,PROPELLER	5901A10010A	5901A10010A	
566000	SWITCH,PRESSURE	6600A20004C	6600A20004C	Low Pressure Switch
566000	SWITCH,PRESSURE	6600A20004E	6600A20004E	High Pressure Switch
566001	SWITCH,MAGNET	6600B000041	6600B000041	For Compressor
566001	SWITCH,MAGNET	6600B000032	6600B000032	For Indoor Motor
738281	MANUAL,SERVICE	3828A30101D	3828A30101D	
137213-1	PANEL ASSEMBLY,SIDE	3721A10096A	3721A10096A	
137213-2	PANEL ASSEMBLY,SIDE	3721A20201A	3721A20201A	
137213-3	PANEL ASSEMBLY,SIDE	3721A20167A	3721A20167A	
237204-1	PANEL,SIDE	3720A21001D	3720A21001D	
237204-2	PANEL,SIDE	3720A21001B	3720A21001B	
W0CZZ	CAPACITOR,DRAWING	0CZZA20001B	0CZZA20001B	For Outdoor Motor
W4400	BELT,V	4400A30002S	4400A30002S	
W6920	RELAY	6920AP3400A	6920AP3400A	For Outdoor Motor

• Optional parts

558511	DRIER ASSEMBLY	5851A20004A	5851A20004A	
566000	SWITCH PRESSURE	6600L000007	6600L000007	High pressure gauge
566000	SWITCH PRESSURE	6600L000006	6600L000006	Low pressure gauge

Specification of Components

MODEL		LK-C1209C00	LK-C120BC00
COMP	P/No	2520UNDU2DA	2520UNDR2AA
	Model name	SR061UBB	SR061RAA
	*RLA (A)	11	16
	**LRA (A)	78	120
	Q'ty	2	2
INDOOR MOTOR	P/No	4681A20094C	4681A20094C
	Output	3 (Hp)	3 (Hp)
	Shaft Dia	28 (mm)	28 (mm)
	RPM	1,720	1,720
OUTDOOR MOTOR	P/No	4681A20106A	4681A20106A
	Output	0.4 (Hp)	0.4 (Hp)
	Shaft Dia	15 (mm)	15 (mm)
	RPM	1,050	1,050
	Q'ty	2	2
OUTDOOR FAN	P/No	5901A10010A	5901A10010A
	Diameter	O.D 556 (mm)	O.D 556 (mm)
INDOOR BLOWER	P/No	5835A20003A	5835A20003A
	Diameter*width	380*280 (mm)	380*280 (mm)
MOTOR PULLY	P/No	3A00217S	3A00217S
	Type	VARIABLE	VARIABLE
BLOWER PULLY	P/No	4561A30021B	4561A30021B
	Type	"REC-B" TYPE	"REC-B" TYPE
	Outside Dia.	190(mm)	190(mm)
V-VELT	P/No	4400A30002H	4400A30002H
	Type	"REC-B" TYPE	"REC-B" TYPE
	Length	53 (inch)	53 (inch)
LOWER PRESSURE SWITCH	P/No	6600A20004C	6600A20004C
	Spec.	OFF : 2.0kgf/ON : 3.5kgf	OFF : 2.0kgf/ON : 3.5kgf
	Rated Voltage	DC 24V	DC 24V
	Maker	SAGINOMIYA	SAGINOMIYA
HIGH PRESSURE SWITCH	P/No	6600A20004E	6600A20004E
	Spec.	OFF: 33kgf ON: 24kgf	OFF: 33kgf ON: 24kgf
	Roted Voltage	DC 12V	DC 12V
	Maker	SAGINOMYA	SAGINOMYA
CAPACITOR for****ODM	P/No	0CZZA20001B	0CZZA20001B
	Spec.	15μF/450V	15μF/450V
FILTER	P/No	5230A20003R	5230A20003R
	Size	418*825(mm)	418*825(mm)
	Q'ty	1	1
CAPILLIARY TUBE	P/No	3E92334G	3E92334G
	Spec.	I.D1.4*1200(mm)	I.D1.4*1200(mm)
	Q'ty	18	18
CONTACTOR for COMP.	P/No	6600B000041	6600B000041
	Spec.	30A, 220V CONTROL	30A, 220V CONTROL
CONTROl for IDM	P/No	6600B0003L	6600B0003L
	Spec.	220V, 22A	220V, 22A
RELAY for ODM	P/No	6920AP3400A	6920AP3400A
	Spec.	220V, 25A	220V, 25A

*RLA : RATED LOAD AMPER
**LRA : LOCK LOAD AMPER

LG Electronics Inc.

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